

New *Platypalpus* Macquart from Hubei, China (Diptera, Empidoidea, Hybotidae, Tachydromiinae)

Ding YANG^{1*} and Weihai LI²

¹ Department of Entomology, China Agricultural University, Beijing 100193, China.
Email: dyangcau@126.com, dyangcau@yahoo.com.cn

² Department of Plant Protection, Henan Institute of Science and Technology, Xinxiang, Henan 453003, China. Email: lwh7969@163.com

* Correspondence author

New *Platypalpus* Macquart from Hubei, China (Diptera, Empidoidea, Hybotidae, Tachydromiinae). - Two new species of the genus *Platypalpus* Macquart belonging to the *P. longicornis* species-group are described as new to science: *P. dalongtanus* sp. n. and *P. pingqianus* sp. n. A key to the species of the genus from Hubei is presented.

Keywords: Diptera - Empidoidea - Tachydromiinae - *Platypalpus* - new species - China - Hubei.

INTRODUCTION

Platypalpus Macquart can be easily separated from all other genera of the family Hybotidae by the following combination of characters: eyes narrowly separated on face and frons, mid leg raptorial, and anal cell present (Chvála, 1975; Grootaert & Chvála, 1992). The genus is distributed worldwide with 547 known species, of which 46 species are recorded from China (Yang *et al.*, 2007). The major references dealing with *Platypalpus* in the Oriental and Palaearctic Regions are as following: Brunetti (1920), Frey (1943), Smith (1965), Chvála (1975, 1989), Grootaert & Chvála (1992), and Grootaert & Shamshev (2006).

So far, only two species are known from Hubei (Yang & Yang, 1997). Recently, two new species belonging to the *longicornis* species-group as defined by Chvála (1989) were collected. We are taking here the opportunity to describe and illustrate them. A key to the species from Hubei is presented which should help to facilitate their identification.

MATERIAL AND METHODS

The specimens were collected by Mr. Qifei Liu. The type material is deposited in the following collections:

CAU = Entomological Museum of the Agricultural University, Beijing, China

MHNG = Muséum d'histoire naturelle, Genève, Switzerland

In order to allow an easy comparison of descriptions of various authors, the terminology of morphological terms follows Grootaert & Chvála (1992). The following

abbreviations for bristles are used: acr-acrostichial, av-anteroventral, h-humeral, oc-ocellar, npl-notopleural, psa-postalar, pv-posteroventral, sc-scutellar, vt-vertical.

KEY TO SPECIES OF *PLATYPALPUS* (DIPTERA, HYBOTIDAE) FROM HUBEI, CHINA

- 1a Thorax yellow; antenna yellow or dark yellow 2
 1b Thorax black; antenna black *hubeiensis* Yang & Yang
 2a Mesonotum and scutellum partly or entirely black 3
 2b Mesonotum and scutellum entirely yellow *pingqianus* sp. n.
 3a Mesonotum entirely yellow; scutellum black, mediotergite yellow; hind femur without ventral spines *guangxiensis* Yang & Yang
 3b Mesonotum with a black mid-longitudinal stripe; scutellum and mediotergite black; hind femur with a row of tiny, black ventral spines on apical half *dalongtanus* sp. n.

SYSTEMATIC PART

Platypalpus dalongtanus sp. n.

Figs 1-3

MATERIAL: Holotype ♂, CHINA, Hubei, Shennongjia, Dalongtan, 27. VI. 2009, leg. Qifei Liu (CAU). – Paratypes, 2 ♂, same data as holotype (CAU, MHNG).

ETYMOLOGY: The specific name refers to the type locality.

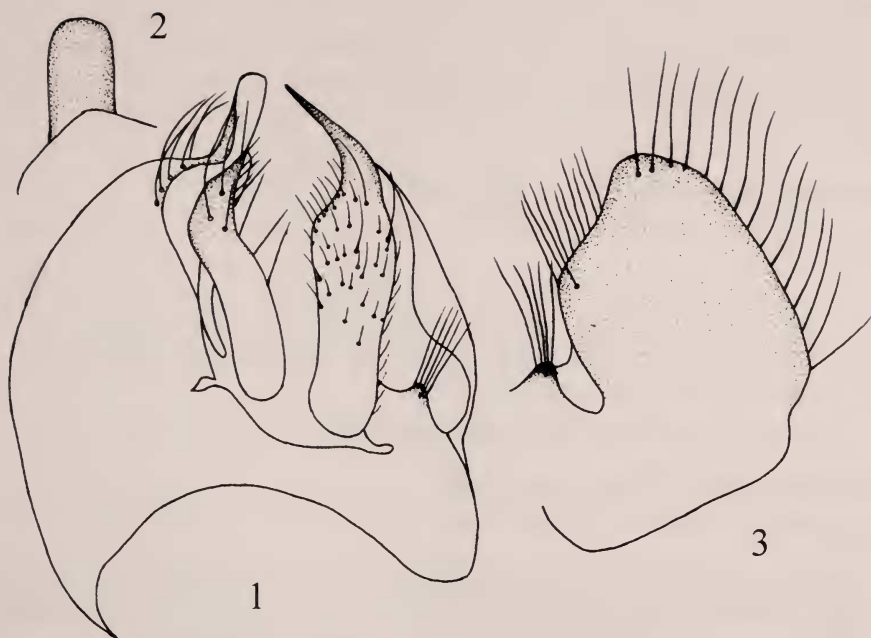
DIAGNOSIS: Thorax yellow except mesonotum with a black mid-longitudinal stripe, scutellum and mediotergite black. 2 pairs of vt. Antenna dark yellow; first flagellomere short oval (1.2-1.3 times longer than wide); mid femur without true posteroventral bristles; mid tibia with a finger-like, obtuse apical spur ventrally which is about as long as diameter of apex of tibia. Hind femur with a row of 8 black tiny ventral black spines on apical half.

DESCRIPTION

Male: Body length 3.2-3.5 mm, wing length 3.8-4.3 mm.

Head black, gray microtrichose. Distance between eyes on frons slightly wider than diameter of anterior ocellus; face narrower than frons. Hairs and bristles on head pale. Ocellar tubercle with 1 pair of *oc* and 4 very short posterior hairs; 2 pairs of *vt*. Antenna dark yellow; scape without dorsal bristles; pedicel with a circle of pale apical hairs; first flagellomere short oval, 1.2-1.3 times as long as wide, with some apical hairs; arista very long, 3.4-3.5 times as long as first flagellomere, blackish, short pubescent. Clypeus dark brown, shining. Proboscis almost as long as height of head, brownish yellow with brown hairs; palpus dark yellow with 3 long pale bristles ventrally.

Thorax yellow, thinly gray microtrichose; mesonotum subshining, with a black mid-longitudinal stripe (its short posterior part narrowed and not reaching scutellum); scutellum and mediotergite black. Hairs on thorax pale, bristles brownish yellow; 1 short hair-like *h* curved inwards, 2 *npl* (anterior *npl* short and hair-like), *acr* short, indistinctly 4-seriate, 1 long *psa* (nearly as long as posterior *npl*), 1 short *presc* (distinctly shorter than *psa*), scutellum with 2 pairs of *sc* (basal pair very short, one third as long as apical pair).



FIGS 1-3

Platypalpus dalongtanus sp. n., male. 1, genitalia, dorsal view; 2, right surstylus; 3, left epandrial lamella.

Legs yellow, but tarsomere 5 of all legs brown. Hairs on legs pale. Fore femur weakly and mid femur distinctly thickened, fore femur 1.1 times and mid femur 1.7-1.8 times as wide as hind femur; mid femur with two rows of short black ventral bristles (av very short, pv slightly longer than av, those on basal 1/4 distinctly longer and paler, more brownish yellow), without row of true pv; mid tibia with a row of blackish ventral bristles and a finger-like, obtuse apical spur which is about as long as apical diameter of the tibia. Hind femur with a row of 8 black tiny ventral spines on apical half.

Wing hyaline; veins brownish yellow, R_{4+5} and M parallel apically; basal cells equal, crossveins contiguous. Squama yellow with pale hairs. Halter yellow.

Abdomen yellow except tergites 1-6 brown or blackish, pale gray microtrichose; hypopygium black. Hairs on abdomen pale.

Male genitalia (Figs 1-3). Left epandrial lamella medially with a row of evenly long medially directed hairs in one row; right epandrial lamella wide in dorsal view, its apical projection (surstylus) nearly quadrate with obtuse apex; left cerci rather long, pointed and spine-like apically; right cercus short with nearly obtuse apex.

Female: Unknown.

DISTRIBUTION: China (Hubei).

REMARKS: The new species is similar to *Platypalpus hamatus* Yang & Yang from Tibet, but it can be separated from the latter by the mesonotum with a narrow mid-longitudinal stripe and the left epandrial lamella with a weak basal process with a brush of long bristles. In *P. hamatus*, the mesonotum has a rather wide mid-longitudinal stripe and the basal process of the left epandrial lamella is bare (Yang & Yang, 1989).

Platypalpus guangxiensis Yang & Yang, 1992

Platypalpus guangxiensis Yang & Yang, 1992: 46. TYPE LOCALITY: China: Guangxi, Tianlin.

DIAGNOSIS: Thorax yellow except scutellum black. 2 pairs of vt. Antenna yellow; first flagellomere short conical, 1.4 times longer than wide; arista 3.6 times as long as first flagellomere. Mid femur without true posteroventral bristles; mid tibia with a finger-like apical spur ventrally.

DISTRIBUTION: China (Hubei, Sichuan, Guangxi).

Platypalpus hubeiensis Yang & Yang, 1997

Platypalpus hubeiensis Yang & Yang, 1997: 1469. TYPE LOCALITY: China: Hubei, Xingshan.

DIAGNOSIS: Thorax entirely black. 2 pairs of vt. Antenna black; first flagellomere long conical, twice as long as wide; arista 3 times as long as first flagellomere. Mid femur without true posteroventral bristles; mid tibia with a finger-like apical spur ventrally.

DISTRIBUTION: China (Hubei).

Platypalpus pingqianus sp. n.

Figs 4-6

MATERIAL: Holotype ♂; CHINA, Hubei, Shennongjia, Pingqian, 7. VII. 2009, leg. Qifei Liu (CAU). – Paratypes: 2 ♂ 1 ♀, same data as holotype (CAU, MHNG).

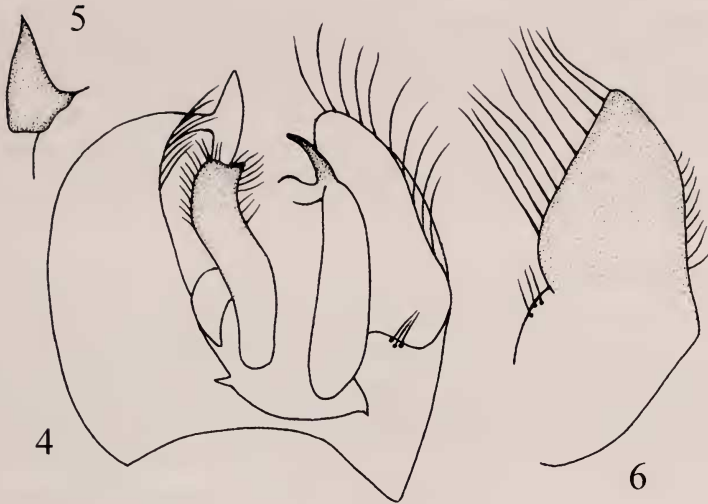
ETYMOLOGY: The specific name refers to the type locality.

DIAGNOSIS: Thorax nearly entirely yellow except katapisternum with a black dot at posterior margin. 2 pairs of vt. Antenna yellow; first flagellomere short oval (1.2-1.3 times longer than wide), arista over 4 times longer. Mid femur without true posteroventral bristles; mid tibia with a finger-like, obtuse apical spur ventrally which is about as long as apical diameter of tibia.

DESCRIPTION

Male: Body length 3.3-3.4 mm, wing length 3.1-3.2 mm.

Head black, gray microtrichose. Distance between eyes on frons slightly wider than diameter of anterior ocellus; face narrower than frons. Hairs and bristles on head pale. Ocellar tubercle with 1 pair of oc and 4 very short posterior hairs; 2 pairs of vt. Antenna yellow; scape without dorsal bristles; pedicel with a circle of pale apical hairs; first flagellomere short oval, 1.2-1.3 times longer than wide, with some apical hairs; arista much longer, 4.1-4.2 times as long as first flagellomere, blackish, short pubescent. Clypeus brownish, medially subshining. Proboscis almost as long as height of head, brownish yellow with brown hairs; palpus yellow with 2 long pale bristles dorsally in apical half.



FIGS 4-6

Platypalpus pingqianus sp. n. male. 4, genitalia, dorsal view; 5, right surstylus; 6, left epandrial lamella.

Thorax yellow, thinly gray microtrichose; mesonotum subshining; katapi-s sternum with a black dot at posterior margin. Hairs on thorax pale, bristles brownish yellow; 1 short hair-like h curved inwards, 2 npl (anterior npl short and hair-like), acr short and indiscinct, irregularly 4-seriate, 1 long psa (nearly as long as posterior npl), 1 short presc (shorter than psa), scutellum with 2 pairs of sc (basal pair very short, one third as long as apical pair).

Legs yellow, but tarsomere 5 of all legs brown. Hairs on legs pale. Fore femur weakly and mid femur distinctly thickened, fore femur 1.1 times and mid femur 2.0-2.1 times as wide as hind femur; mid femur with two rows of short black ventral bristles (av very short, pv slightly longer than av, those on basal 1/4 longer and more brownish yellow), without row of true pv; mid tibia with a row of blackish ventral bristles and finger-like apical spur which is about as long as diameter of tibia at apex.

Wing hyaline; veins brownish yellow, R_{4+5} and M nearly parallel apically; basal cells subequal, crossveins therefore almost contiguous. Squama yellow with pale hairs. Halter yellow.

Abdomen yellow except tergites 1-6 brownish yellow, pale gray microtrichose; hypopygium brown. Hairs on abdomen pale.

Male genitalia (Figs 4-6). Apical projection (surstylus) of left epandrial lamella large and subtriangular with long bristles laterally and with a short row of short pale hairs; right epandrial lamella wide in dorsal view, its apical projection (surstylus) rather small and subtriangular with acute tip; left and right cercus of subequal length; left cercus with spine-like apex; right cercus short, its apex nearly obtuse.

Female: Body length 4.2 mm, wing length 3.3 mm. Similar to male.

DISTRIBUTION: China (Hubei).

REMARKS: The new species is very similar to *Platypalpus xanthodes* Yang & Merz from Guangxi, but it can be separated from the latter by the left cercus with the acute apical portion short, the right surstylus short and subtriangular with an acute tip, and the left epandrial lamella nearly acute apically. In *P. xanthodes*, the left cercus has a long, acute apical portion; the right surstylus is long and somewhat quadrate with a wide and nearly truncate tip; the left epandrial lamella is wide and obtuse apically (Yang & Merz, 2005).

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